

A Process for Consolidation of Redundant Nursing Documentation Forms

Shannon Cowden, R.N., University of Washington, Seattle, Washington

L. Clark Johnson, Ph.D., University of Washington, Seattle, Washington

Abstract

Form redundancy can lead to duplicate documentation which can be the source of patient and staff frustration, as well as data errors. A data-driven systematic process for consolidation of the multiple redundant forms used in various patient care areas across a health care delivery system is proposed and tested using the 21 intake forms currently used by a regional HMO.

Introduction

Redundant documentation is a common problem in many health care settings, especially those still using manual documentation. This redundancy is inefficient and is a major annoyance to those patients who are asked to provide the same information over and over again, often within a single episode of care ⁽¹⁾. Data integrity is also called into question when the same data is collected more than once, by more than one provider ⁽²⁾. A survey of the forms documenting the nursing admission process for the three campuses of a large integrated health care delivery system revealed 21 unique intake forms. The variation in forms used across and within the three locations presented a major informatics challenge with the potential to compromise the future implementation of a computerized clinical information system. The consolidation of forms was determined to be a necessary strategic step to support organizational readiness in anticipation of automation. We are unaware of any effort to define a data driven systematic process for the consolidation of redundant documentation forms. This project seeks to define and test such a solution.

Methods

The 2,640 data elements in the 21 forms were entered as rows into spreadsheets. Each data element was further classified with regard to context (e.g., Cardiac, Medications, Nutrition), category (e.g., History, Assessment, Plan), and response modality. The resulting files were combined into a data file and analyzed using a statistical software package (SPSS™). A data processing algorithm collapsed redundant items into a single data record. This record was used to identify the linkages between the 21 forms. An index for each item indicated the number of forms on which the item appears. Using

this index, unique items (i.e., data requested on only one form) were isolated from those that were repeatedly requested. Subsequent analysis using correlation matrixes and clustering techniques provided a mechanism by which automated data collection could be optimally structured.

Results

Reports documenting the results of the statistical analyses of similarities and differences amongst the various forms and the data elements they contain were generated and presented to the hospital's "Forms and Documentation" committee. The reports were used as tools to facilitate discussion and decision-making concerning final form redesigns. An evaluation by committee participants and data structure designers is presented.

Conclusion

Multiple forms documenting similar patient care processes is commonplace in the current health care environment of large, integrated health care delivery systems. The creation of a process to help with consolidation, that is easily duplicated, is a boon to all nurse informaticists. The analytic and subsequent reporting processes used in this project provide a systematic method of forms consolidation that can be applied to other settings. This is important foundational work and is essential for easing the transition from a manual documentation system to a more standardized, automated system.

References

1. Laing, K. The benefits and challenges of the computerized electronic medical record. *Gastrointest Nurs* 2002; 25 (2):41-45.
2. Barr, BJ. Managing change during an information systems transition. *AORN* 2002; 75 (6):1085-1092.